

WHAT IS CLAIMED IS:

- 1 1. A method for communicating, comprising:
2 receiving a first segment from a wired network; and
3 transmitting one or more second segments over a wireless link, wherein the one
4 or more second segments contain data from the first segment, and wherein the size of at
5 least one of the second segments is based on a status condition.
- 1 2. The method of claim 1, wherein the status condition is associated with the
2 wireless link.
- 1 3. The method of claim 2, wherein the wireless link is based on a continuous
2 communication technique.
- 1 4. The method of claim 2, wherein the wireless link is based on a burst
2 communication technique.
- 1 5. The method of claim 2, wherein the status condition is received from an
2 access point associated with the wireless link.
- 1 6. The method of claim 2, wherein the status condition is received from a
2 wireless device associated with the wireless link.
- 1 7. The method of claim 2, further comprising sending an acknowledgment
2 for the first segment over the wired network before the data contained in the first segment
3 is received by a wireless receiver.
- 1 8. The method of claim 2, wherein at least one of the first segment and the
2 second segment is based on transmission control protocol (TCP).
- 1 9. The method of claim 2, wherein the status condition is based on at least a
2 bit-error rate.
- 1 10. The method of claim 2, wherein status condition is based on at least a
2 number of erroneous frames.
- 1 11. The method of claim 2, wherein status condition is based on at least a
2 signal level associated with the wireless link.
- 1 12. The method of claim 11, wherein status condition is further based on at
2 least one of a noise level associated with the wireless link and an interference level
3 associated with the wireless link.

1 13. The method of claim 2, wherein status condition is further based a rate of
2 change of an error parameter.

1 14. The method of claim 2, wherein the wireless link is a cellular link.

1 15. The method of claim 2, wherein the wireless link is a satellite-based link.

1 16. An apparatus for communicating between a wired network and a wireless
2 link, comprising:

3 a second interface coupled to the wireless link, wherein the second device
4 communicates using wireless segments; and

5 a segment controller that controls the size of at least one wireless segment based
6 on a status condition.

1 17. The apparatus of claim 16, wherein the status condition is associated with
2 the wireless link.

1 18. The apparatus of claim 17, further comprising a first interface coupled to
2 the wired network, wherein the first device communicates using wired segments.

1 19. The apparatus of claim 18, further comprising a reformatting device that
2 extracts data from a first wired segment and incorporates the wired data into one or more
3 first wireless segments.

1 20. The apparatus of claim 19, wherein the reformatting device extracts data
2 from a second wireless segment and incorporates the wireless data into one or more
3 second wired segments.

1 21. The apparatus of claim 18, further comprising a reformatting device that
2 extracts data from a second wireless segment and incorporates the wireless data into one
3 or more second wired segments.

1 22. The apparatus of claim 18, further comprising an acknowledgment device
2 that acknowledges a first wired segment received from the wired network before the data
3 contained in the first wired segment is received by a wireless receiver.

1 23. The apparatus of claim 18, wherein the first interface communicates based
2 on at least transmission control protocol (TCP).

1 24. The apparatus of claim 18, wherein the second interface communicates
2 based on at least transmission control protocol (TCP).

1 25. The apparatus of claim 18, wherein the status condition is based on at least
2 a bit-error rate.

1 26. The apparatus of claim 18, wherein status condition is based on at least a
2 number of erroneous frames.

1 27. The apparatus of claim 18, wherein status condition is based on at least a
2 signal level associated with the wireless link.

1 28. The apparatus of claim 27, wherein status condition is further based on at
2 least one of a noise level associated with the wireless link and an interference level
3 associated with the wireless link.

1 29. The apparatus of claim 18, wherein status condition is further based on a
2 status condition trend.

3 30. A method for communicating between a first network and a second
4 network, comprising:
5 receiving first data from the first network; and
6 transforming the first data into second data having a second format, wherein the
7 second format is based on a status condition of the second network.

1 31. The method of claim 30, further comprising transmitting the second data
2 to a receiving device associated with the second network.

1 32. The method of claim 31, wherein the status condition is received from the
2 receiving device.

1 33. The method of claim 32, wherein the status condition is based on an
2 outgoing channel associated with the receiving device.

3 34. The method of claim 33, wherein the second network is a wireless
4 network.

1 35. The method of claim 34, further comprising receiving an acknowledgment
2 from the receiving device.

1 36. The method of claim 34, wherein at least one of the first format and the
2 second format is based on transmission control protocol (TCP).

3 37. An apparatus for communicating between a first network and a second
4 network, comprising:

5 a first interface that receive first data from the first network; and

6 a reformatting device that transforms the first data into second data having a
7 second format, wherein the second format is based on a status condition of the second
8 network.

1 38. The apparatus of claim 37, further comprising a second interface that
2 transmits the second data to a receiving device associated with the second network.

1 39. The apparatus of claim 38, wherein the status condition is received from
2 the receiving device.

1 40. The apparatus of claim 39, wherein the status condition is based on an
2 outgoing channel associated with the receiving device.

1 41. The apparatus of claim 40, wherein the second network is a wireless
2 network.

1 42. The apparatus of 41, further comprising an acknowledgment device that
2 receives an acknowledgment from the receiving device.

1 43. The apparatus of claim 41, wherein at least one of the first format and the
2 second format is based on transmission control protocol (TCP).

1 44. Segmenting the end-to-end link into wireless and wired links and isolating
2 the performance of the wireless link from the performance of the wired links using the
3 apparatus of claim 37 on both sides of the wireless link.